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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,674	08/19/2003	Dong-ki Hong	1293.1800	3494
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STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER CHU, KIM KWOK	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 01/09/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/642,674

Applicant(s)

HONG ET AL.

Examiner

kim-kwok CHU

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Remarks filed on 11/20/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Son et al. (U.S. Patent 6,282,161) in view of Erbert (U.S. Patent 4,727,533).

4. With respect to Claim 1, Son teaches a method of correcting a tilt in a disk drive very similar to that of the present invention. For example, Son teaches the following:

(a) detecting a tilt of a disc 11 loaded in the disc drive (Figs. 2 and 7, steps S710); searching a memory 38 in the disc drive for a tilt angle for a recording or reproducing sector of the disc in which the tilt is detected (Figs. 2 and 7, step S712; column 7, lines 22-26); calculating (by interpolation) a tilt angle for the recording or reproducing sector based on the detected tilt of the disc if no tilt angle is found in the memory 38 (Fig. 7, step S714; column 7, lines 31-33); correcting the tilt of the disc (Fig. 7, step S716); storing the calculated tilt angle in the memory so that the

calculated tilt angle is used for the recording or reproducing sector (Fig. 7, step S712); if a tilt angle is found in the memory 38, the tilt of the disc is corrected using the found tilt angle; and if the tilt angle is not found in the memory 38, the tilt of the disc is corrected using the calculated (interpolated) tilt angle (Fig. 7, steps S710-S716), the recording or reproducing sector of the disc 11 is based on information on the position of a pickup for driving a motor of the pickup in the disc drive (Figs. 2 and 5; optical pickup is moved by servo tracking pulses; steps S504 and S508).

However, Son does not teach that the position of a pickup is based on the number of pulses for driving a motor.

Erbert teaches that the position (tracking/focusing) of a pickup 10 is based on the number of pulses (digital commands) for driving a motor 44 (Fig. 6; column 10, lines 45-50, lines 63-67; column 11, lines 4-6).

Although Son does not specify his pickup is driven by digital pulses apply to a stepping motor, for the advantage of precision tracking servo control, it would have been obvious to one of ordinary skill in the art of use a stepping motor such as Erbert's because the stepping motor can be driven under command pulses to position Son's pickup between tracks with high precision.

5. Apparatus claims 3-6 are drawn to the apparatus corresponding to the method of using same as claimed in claim 1. Therefore apparatus claims 3-6 correspond to method claim 1, and are rejected for the same reason of obviousness as used above.

6. Claim 16 has limitations similar to those treated in the above rejection, and is met by the reference as discussed above.

7. Claim 7 is rejected under 35 U.S.C. 103 (a) as being unpatentable over by Son et al. (U.S. Patent 6,282,161) in view of Erbert (U.S. Patent 4,727,533) and Nishiwaki (U.S. Patent 6,704,254).

Son in view of Erbert teaches a tilt correcting apparatus very similar to that of the present invention as recited in claim 7. However, both Son and Erbert do not teach the following:

(a) with respect to Claim 7, tilt correcting method is implemented by a computer readable encoded with processing instructions (program).

Nishiwaki teaches an optical disk control method where its tilt adjustment is controlled by a program stored in a recording medium (column 17, claim 14).

In order to access compensated values in a tilt correcting operation, a software servo program is more flexible than a hardware device such as a digital signal processing unit. Therefore, when there is a disc servo control where variables such as tilt correcting values needed to be stored, it would have been obvious to one of ordinary skill in the art to implement the tilt servo method such as Son in view of Erbert's in form of Nisiwaki's software executable instructions and stored it in Nishiwaki's computer readable recording medium instead of electronic circuits, because the software design cost less and its instructions/steps can be updated or modified.

8. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen, can be reached on (571) 272-7579.

The fax number for the organization where this application or proceeding is assigned is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished application is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9191 (toll free).

Kim-Kwok CHU
cc *1/2/08*
Examiner AU2627
January 2, 2008

(571) 272-7585

[Signature]
HOA T. NGUYEN
SUPERVISORY PATENT EXAMINER
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1/5/08